

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	222820	(heat near pump) or (vapor near compression) or refrigerat\$3	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:50
S2	222820	(heat near pump) or (vapor near compression) or refrigerat\$3	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:51
S4	260482	compressor	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:51
S5	341202	radiator or (heat near exchang\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:51
S6	63909	expander or (expansion near valve)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:52
S7	130111	evaporator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:54
S8	217076	refrigerant or coolant	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:54
S9	6700	S2 and S4 and S5 and S6 and S7 and S8	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:54
S10	978	S9 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:54
S11	473	S10 and current	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:57
S12	319	S11 and convert\$3	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 12:59
S14	239	S9 and (permanent near magnet)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:01
S15	195	S14 and generat\$3	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:06
S16	55	S12 and (permanent near magnet)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:09

S17	37	S10 and (current near sensor)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:09
S18	143	S9 and (current near sensor)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:09
S19	438	(heat adj pump) and compressor and radiator and (expander or (expansion adj valve)) and evaporator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:29
S20	104	S19 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:29
S21	13	S19 and (current near3 sensor)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:29
S22	2	"heat pump apparatus using expander"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2009/10/07 13:30
S27	1	*2005310749*.pn.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:36
S28	1	JP-2005310749-\$ did.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 13:45
S29	72	S20 and sens\$3	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 14:07
S31	1041	S9 and ((carbon adj dioxide) or co2)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 14:15
S32	118	S31 and generator and sens\$3	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 14:15
S33	40	S32 and (heat adj pump)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 14:16
S34	16	((KEI ZO) near2 (MATSUI)).INV.	US-PGPUB; USPAT	OR	ON	2009/10/07 14:18
S35	138	((KEI ZO) near2 (MATSUI)).INV.	EPO; JPO; DERWENT	OR	ON	2009/10/07 14:19
S36	381	((HIROSHI) near2 (HASEGAWA)).INV.	US-PGPUB; USPAT; USOOCR	OR	ON	2009/10/07 14:19
S37	2629	((HIROSHI) near2 (HASEGAWA)).INV.	EPO; JPO; DERWENT	OR	ON	2009/10/07 14:19
S38	33	((FUMI TOSHI) near2 (NISHIWAKI)).INV.	US-PGPUB; USPAT	OR	ON	2009/10/07 14:20

S39	341	((FUMITOSHI) near2 (NISHIWAKI)).INV.	EPO; JPO; DERWENT	OR	ON	2009/10/07 14:20
S42	65	(S35 S36 S37 S38 S39) and (heat near pump)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 14:59
S46	323	62/87.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 15:57
S48	463	(62/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2009/10/07 15:57
S49	62	S46 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/07 16:53
S55	2	"2000241033".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2009/10/07 17:10
S56	2	"2000249411".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2009/10/08 07:03
S58	1	"2001165513".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 07:09
S60	1	p-01168518-\$..did.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 07:12
S61	1	"2000345952".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 07:21
S62	1	"20040004559"	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 07:24
S64	2	"2000241033".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT	OR	ON	2009/10/08 07:25
S66	1	"2002354896".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 07:25
S67	620	(62/402).CCLS.	US-PGPUB; USPAT	OR	OFF	2009/10/08 09:17
S68	95	S67 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 09:21
S70	463	(62/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2009/10/08 10:22
S71	36	S70 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 10:22

S72	27467	(ac near convert\$3) or ((alternating adj current) near convert\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 10:55
S73	9790	S72 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 11:04
S74	9352	S73 and ((direct adj current) or dc)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 11:04
S75	831	S74 and (magnet\$3 with pole)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 11:05
S76	736	S75 and (revolution\$2 or rotation\$2 or rpm or (rotation\$1 adj per adj minute))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 11:06
S78	679	S76 and (tim\$3 or lag or delay)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 11:07
S79	1	"2004108220".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 11:11
S80	0	("2006/0107681").URPN.	USPAT	OR	ON	2009/10/08 11:12
S81	0	("2006/0236715").URPN.	USPAT	OR	ON	2009/10/08 11:12
S82	16	("3153916" "3321930" "3934424" "5875643").PN. OR ("6272871").URPN.	US-PGPUB; USPAT; USOOR	OR	ON	2009/10/08 11:12
S83	14	("1938205" "2494120" "2519010" "3277658" "4235079" "5157931" "5289692" "5819554" "6044655").PN. OR ("6543238").URPN.	US-PGPUB; USPAT; USOOR	OR	ON	2009/10/08 11:12
S84	27467	(ac near convert\$3) or ((alternating adj current) near convert\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 13:02
S85	9790	S84 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 13:02
S86	9352	S85 and ((direct adj current) or dc)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 13:02
S87	831	S86 and (magnet\$3 with pole)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 13:02
S88	736	S87 and (revolution\$2 or rotation\$2 or rpm or (rotation\$1 adj per adj minute))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 13:02

S89	679	S88 and (tim\$3 or lag or delay)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 13:02
S90	84	S89 and (estimat\$3 or predict\$3) and (current same sens\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/08 13:02
S93	78448	("310").CLAS.	US-PGPUB; USPAT	OR	OFF	2009/10/09 08:17
S94	14335	S93 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/09 08:18
S95	751	S94 and compressor	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/09 08:18
S96	490	S94 and compressor	USPAT	OR	ON	2009/10/09 08:19
S98	2072	(generator same (AC or (alternating adj current))) and "322".clas.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 14:07
S99	2256	(generator same (AC or (alternating adj current))) and "290".clas.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 14:07
S100	1726	(S98 or S99) and converter	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 14:08
S101	267	S100 and (magnetic same pole)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 14:09
S102	119	S101 and (current with sensor)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 14:10
S103	119	S102 and (tim\$3 or delay \$3 or elaps\$3 or count\$3 or clock or stopwatch)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 14:11
S104	114	(heat adj pump) and ("322" or "290").clas.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 15:12
S105	101	S104 and generator	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 15:12
S107	50	S105 and compressor	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	ON	2009/10/13 15:13

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp

L2	0	"a first converter which converts AC power which is output from said permanent magnet type synchronization power generator into DC power, which estimates a magnetic pole position of said permanent magnet type synchronization power generator by a current value detected by said current"	US-PGPUB; USPAT; UPAD	OR	ON	2009/10/13 16:40
L3	68	compressor and radiator and evaporator and refrigerant and generator and converter	US-PGPUB; USPAT; UPAD	OR	ON	2009/10/13 16:41
L4	3	compressor and radiator and evaporator and refrigerant and generator and converter and (current adj sensor)	US-PGPUB; USPAT; UPAD	OR	ON	2009/10/13 16:41

10/ 13/ 2009 4:47:15 PM

C:\ Documents and Settings\ jbradford\ My Documents\ EAST\ Workspaces\ Heat Pump Apparatus. wsp